At home or away: energy conservation made easy

by Melissa Chiechi

Brownouts, rolling blackouts, blackouts and cascading outages are terms we are hearing this summer. Electrical outages, caused by increased consumer demand, are of constant concern to Western's customers and utilities across the nation.

Simple actions by consumers can help dispatchers and schedulers meet the demand during these hot summer months.

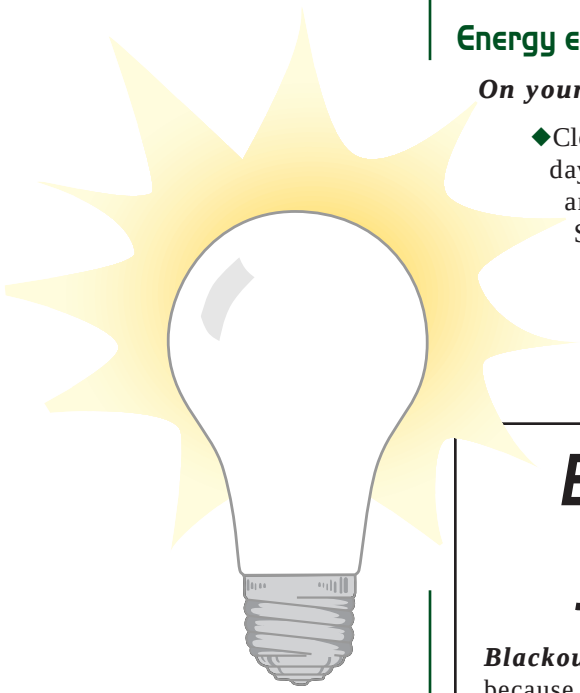
Energy efficiency consumer tips

On your way out the door:

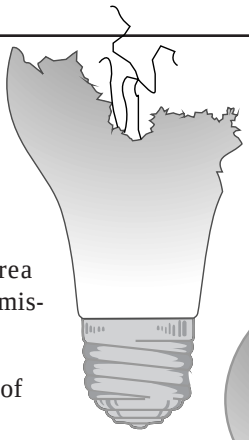
- Close drapes to keep out the hot daytime sun, especially on south and west-facing windows. Sunny windows make air conditioners work two to three times harder.
- Turn the air conditioner thermostat to 78 degrees (or higher) when leaving home. It's a comfortable indoor temperature and can yield big savings. In fact, for every two degrees you raise your central air conditioning setting, you'll reduce your cooling costs by about 5 percent.
- Turn off lights and home computers when not in use. Set fax machines and printers to sleep mode when not in use. Heat generated by lights and equipment adds to your cooling costs. Leaving just one 75-watt bulb on 8 hours each day this summer will cost you about $5.75 for the season.

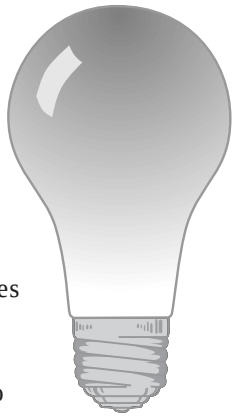
When at home:

- Turn off lights when leaving a room for more than a minute.
- Turn on task lights; turn off general



Energy terms you can use:





Blackout: temporary loss of electricity in an area because there's not enough generation or transmission capacity to meet the demand for power.

Brownout: the resulting or partial elimination of lights when voltage sags.

Outage: an interruption in electric power. Causes can be manmade or natural, purposeful or accidental.

Cascading Outages: a connected series of outages that resembles dominos falling one after the other.

Rolling Blackouts: recurring outages across a region designed to prevent a system disturbance when power demand is greater than the available generation or transmission capacity.

System disturbance: a regional blackout.

and overhead lights.

- Turn off display and decorative lights.
- Turn off printers, copiers, personal computers and monitors when idle.
- Activate and use the ENERGY STAR "power saver" and "sleep" features whenever possible.
- Shut off coffee pots, radios, fans and other appliances.
- Delay laundry and dishwasher use until night time. This will reduce the stress to local electric systems at peak times, as well as ease the burden on your air conditioning system.
- Shut air conditioning vents and close doors in areas that are used the least to reduce demand on your air conditioning system and save money.

Any time:

- Reduce the run time of electric pumps in backyard swimming pools and use energy-efficient pool heaters. Using a smaller electric pump and running it less than three hours a day can save as much as 75 percent. Additionally, Americans spend $3.5 billion every year heating backyard swimming pools.
- Turning off your electric heat pump or electric heater on the hottest days of the year will reduce electricity demand at peak times. Installing a solar heating system and using a pool cover will also save you money.
- Change air conditioner filters regularly. Dirty filters cause air conditioning systems to work harder than necessary—and use more energy. Regularly changing filters, per manufacturers' recommendations, will reduce cooling bills.

For a free booklet filled with these and other energy saving tips, call 800-DOE-EREC (800-363-3732), or find them on the web at **http://www.eren.doe.gov/consumerinfo/ energy.savers/**.

Common appliances that use phantom loads and calculated annual cost based on $.85 per kWh.

Appliance	Yearly Cost
19" color TV	$6.95
TV cable box	$.83
Stereo receiver	$1.83
Microwave	$1.38
Phone answering machine	$1.95
Personal computer	$.74

(Source: Lincoln Electric System Energy Info)

Phantom load stealing energy

Many household appliances use electricity even when turned off.

Televisions, VCRs, microwaves, computers, stereo equipment, answering machines and telephones draw energy continuously. This is sometimes called "phantom load."

These appliances use the power for various reasons, such as providing the convenient "instant-on" feature for your television and "remembering" your local stations. Although the amount of energy used by these appliances is not significant, the cumulative amount used by millions of appliances in the United States is impressive.

A single 27-inch television uses about 100 kilowatthours of electricity a year if it's plugged in and never turned on. At the rate of 8.5 cents per kWh, it would cost $8.50 a year to keep this set ready to turn on instantly. Assuming there are 10 million similar televisions in the United States, these sets use one billion kWh of energy each year when turned off. This is the same amount of energy used each year by some 84,000 typical 1,500 square- foot homes (based on 1,000 kWh of electricity usage per month, per house).

Phantom load used each year by appliances in the United States accounts for a significant portion of generation capacity.

You can control phantom load by using a wall switch that cuts off electricity to the plug, or by plugging appliances into a power strip or surge suppressor that you can turn on and off manually.